

Amendments to the Specification:

Replace the second paragraph on page 9, beginning on line 7 (paragraph [0040] in the substitute specification), with the following replacement paragraph [0040]:

*a1*

[0040] What is achieved with this re-mapping of number representation (denoted as Re-Mapping for economy of language) is the ability to represent lower frequencies with more significant bits ~~by~~ and mapping higher frequencies with ~~with~~ less significant bits ~~digits~~. In particular, as  $2 \cos(2\pi f/f_s)$  varies from -2 to 2,  $\varepsilon$  is defined to vary from 4 to 0. Smaller frequency values produce smaller values of  $\varepsilon$ , helping to satisfy asymmetric accuracy requirements of the human auditory system.